Dental Lights

Overview

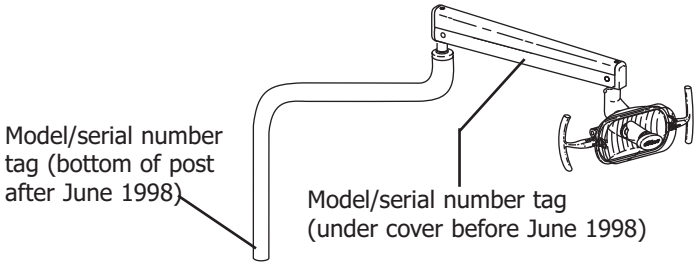
This section presents the Pre-Cascade and Cascade dental lights and their specifications. Detail on how to service and adjust lights and troubleshoot specific problems is presented. For more information on service parts, see the *Genuine A-dec Service Parts Catalog* or contact customer service.

If you are looking for information about the Performer dental light, please see *Performer (PR)*.

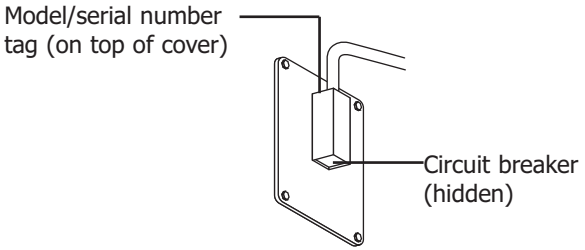
Locating Model/ Serial Number and Circuit Breakers

NOTE: Circuit breakers (post June 1998) and fuses (before June 1998) are located in the power supply.

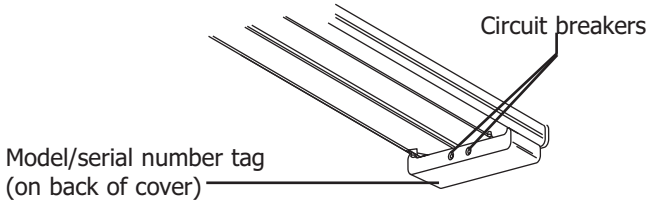
The model/serial number tags identify the light model and manufacture date. If you have difficulty locating the model/serial number or circuit breaker locations on the lights, the following examples may be helpful. The circuit breakers automatically interrupt the flow of electricity to the light if an over-current condition occurs.



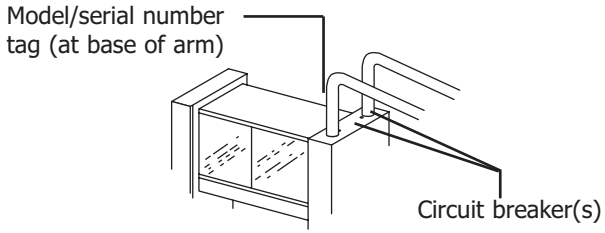
Unit Mount and Radius Lights



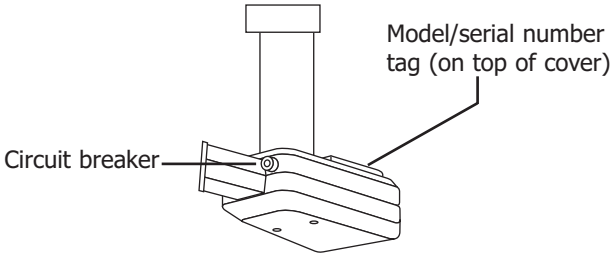
Wall Mount



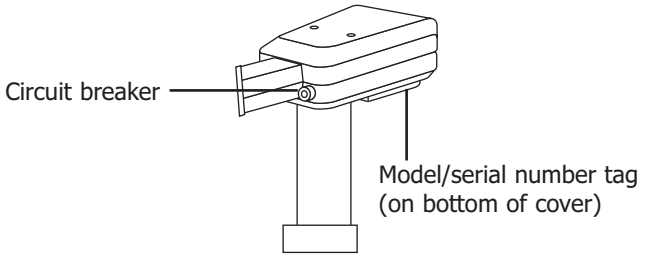
Track Light



Preference



Ceiling Light

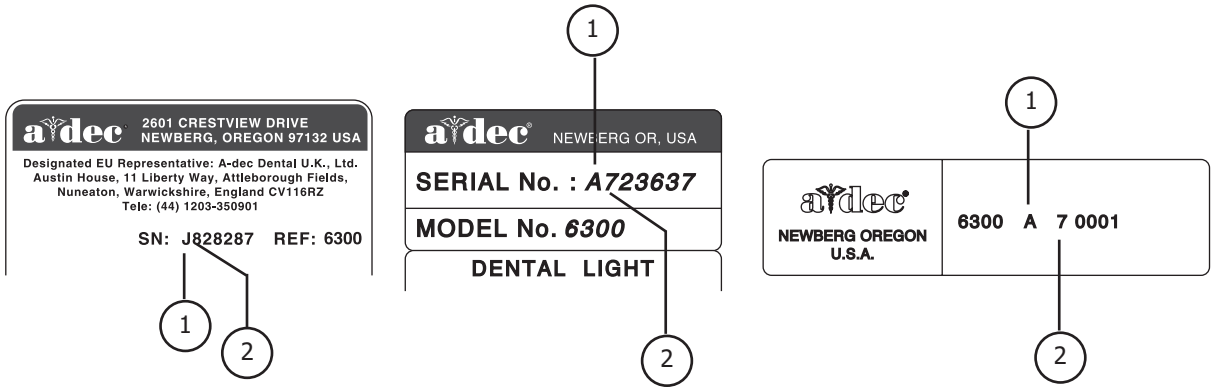


Post Mount

Reading Manufacture Dates

Different versions of the light can be distinguished by month and year manufactured. This information is included in the serial number of each dental light.

The following examples show how to identify the month and year in which a light was manufactured.

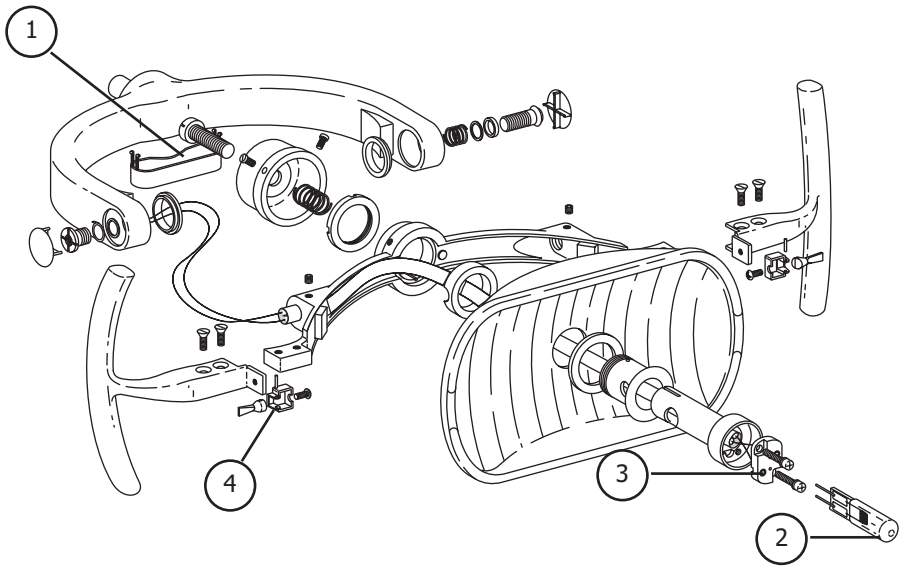


Serial/Model Number Label

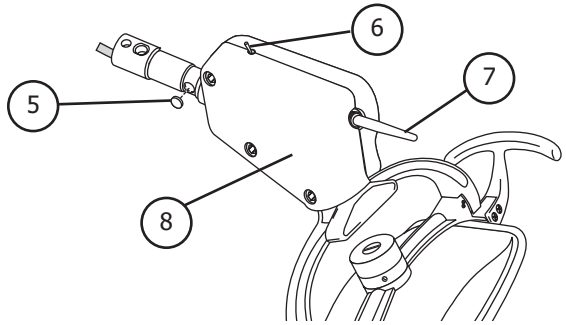
Item #	Description
1	Month of manufacture The first letter of the serial number indicates the month the product was manufactured; e.g., A is January.
2	Last digit of the year manufactured, e.g., 7 is 1997

Cascade Light Head

Item #	Part Number	Description
1	28.1004.00	Bulb and holder
2	041.179.01	Bulb
3	90.0463.01	Lamp socket kit
4	28.1012.00	Bracket assembly (2 required)
5	28.0679.01	Pivot stop
6	90.1043.00	Intensity switch kit
7	90.1039.00	On/Off switch kit
8	28.1464.01	Switch housing kit



Cascade Light Head

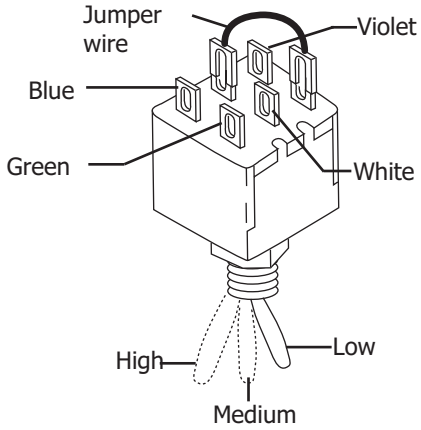


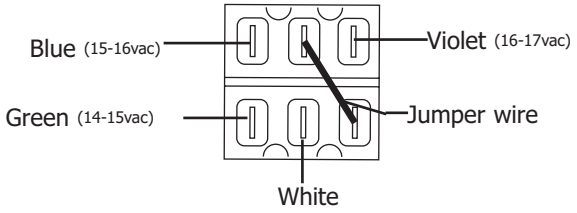
Cascade Light Head

Identifying Intensity Switch Connections (Cascade)

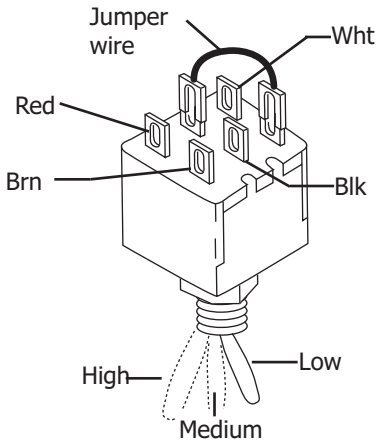
The three-position intensity switch is used to set light intensity at one of three settings: low, medium, or high. The replacement kit for the intensity switch is P/N 90.1043.00.

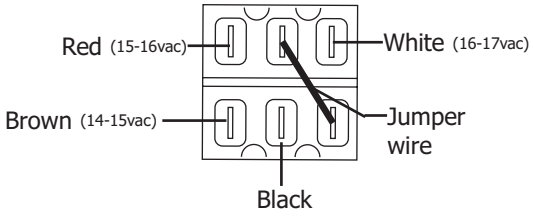
The following illustrations identify the connections for attaching appropriate wires from the intensity switch to the dental light.





After September 1998

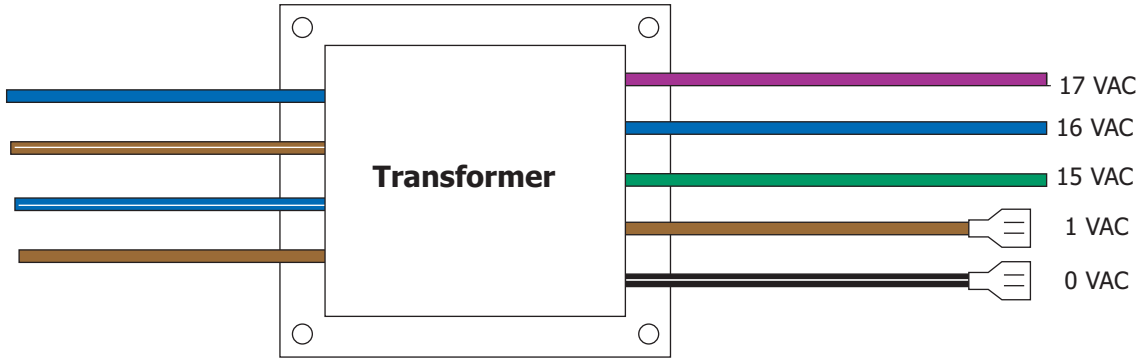




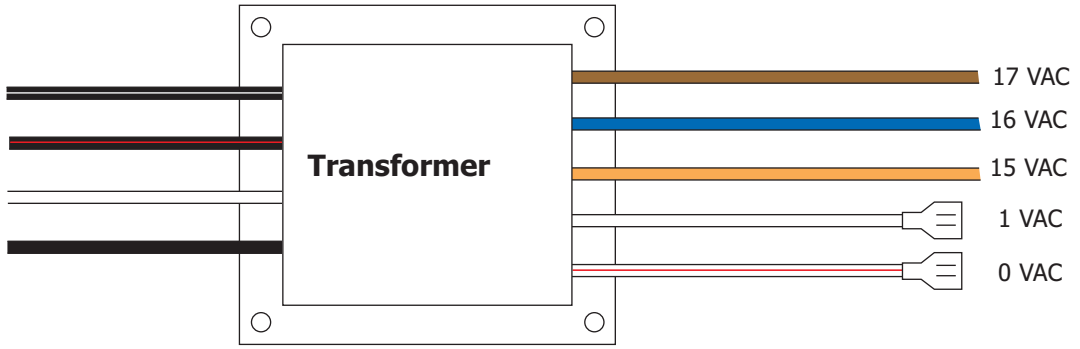
Before September 1998

Wiring Transformer, (110-120 VAC, 240 VAC)

The transformer converts incoming source power to the correct voltage to power the dental light head. The wiring diagram shows the wiring changes for the transformers.



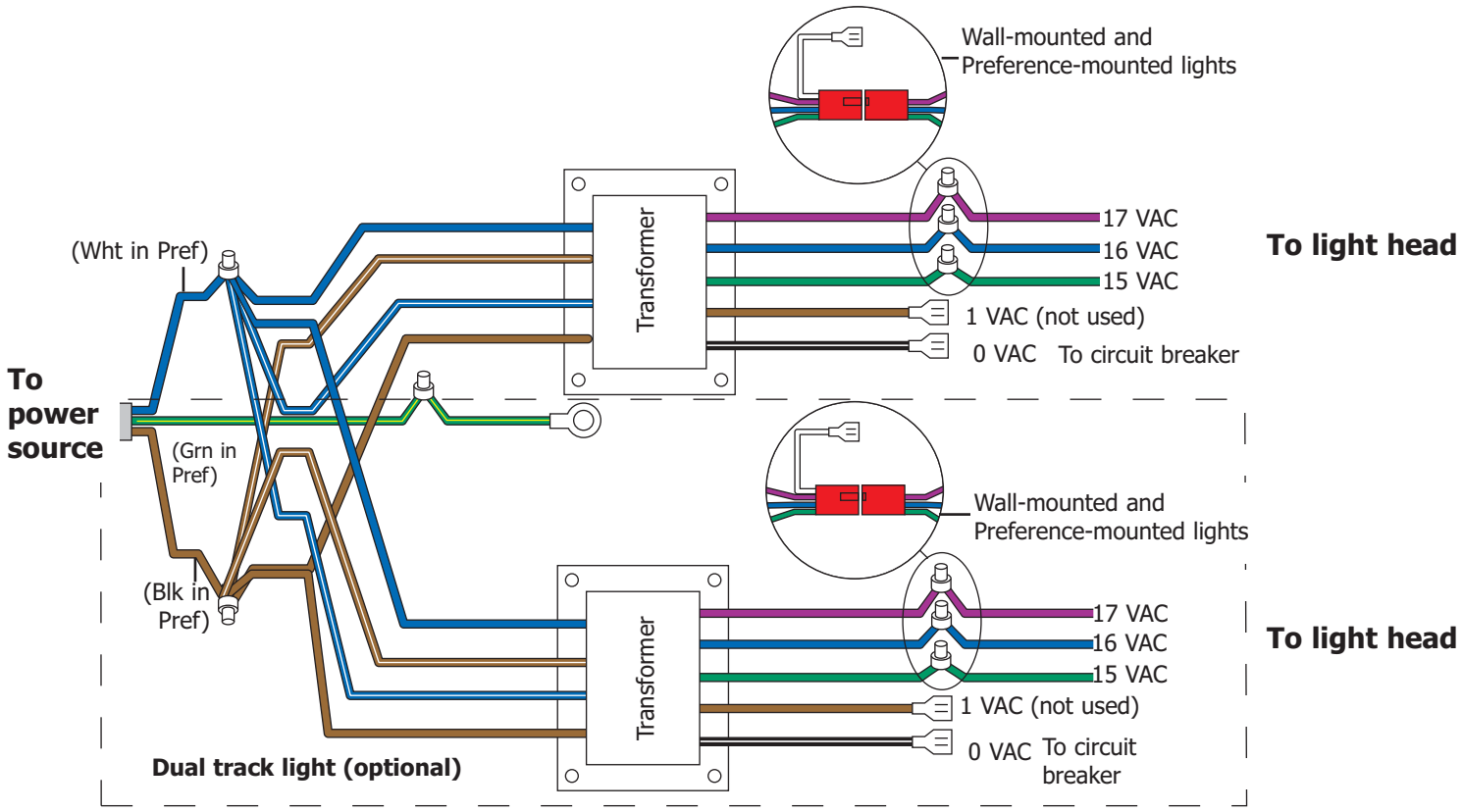
After September 1998



Before September 1998

NOTE: The power transformer had lower output voltages and no "1 VAC" tap before January 1989.

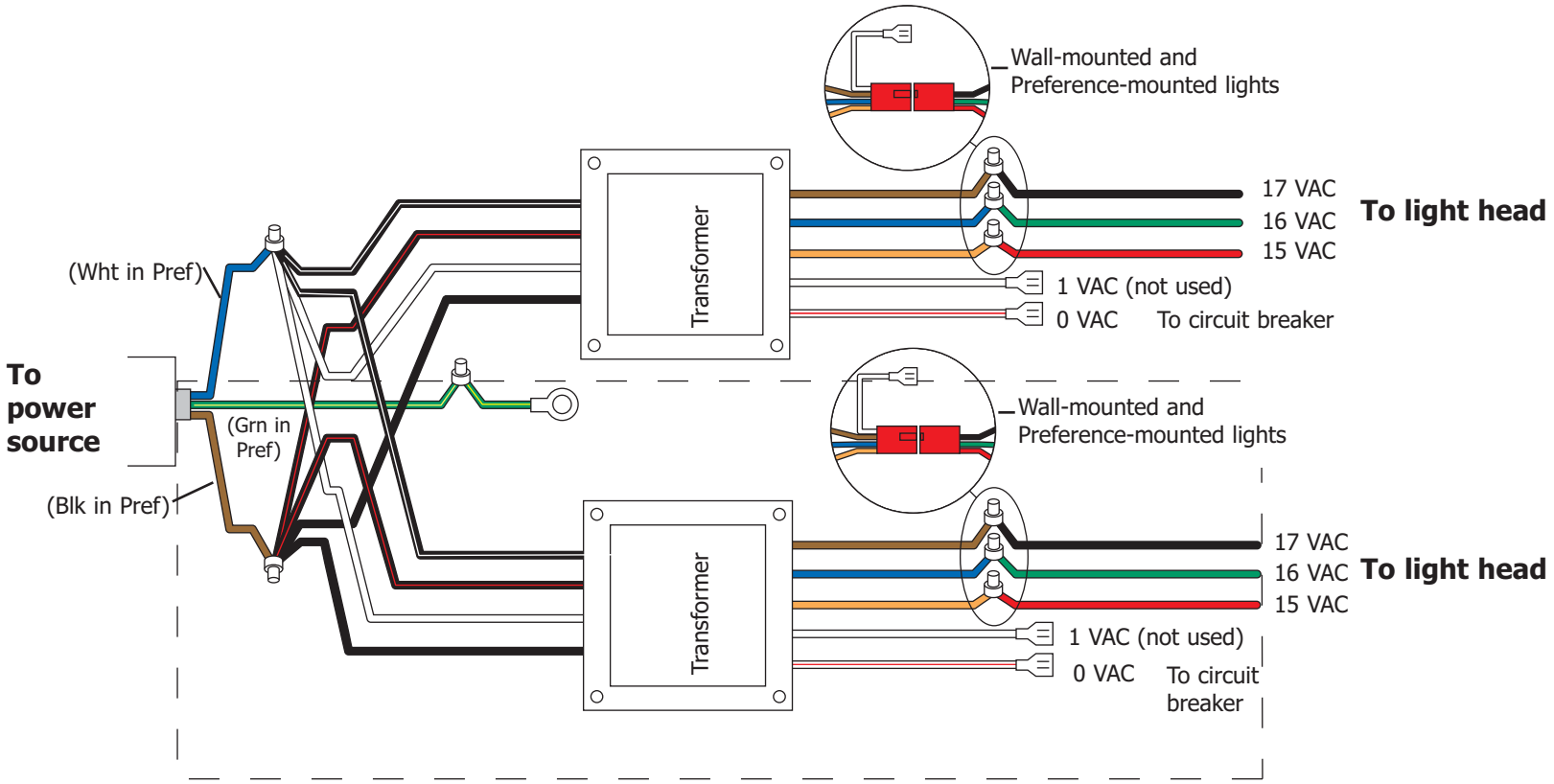
Wall-Mount, Single/Dual Track, Preference, and Ceiling-Mounted Lights



After September 1998

NOTE: Voltages shown are assuming 120/240 VAC. Secondary voltages measured without the lamp inserted will register 1.2 VAC higher.

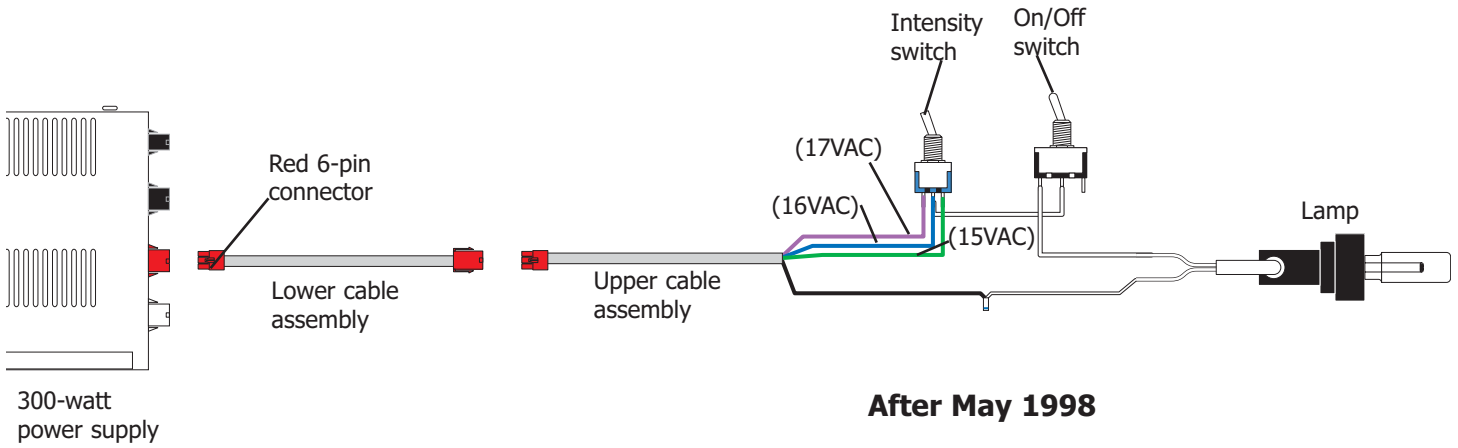
Wall-Mount, Single/Dual
Track and Preference
Mounted Lights



January 1989 to September 1998

NOTE: Voltages shown are assuming 120/240 VAC. Secondary voltages measured without the lamp inserted will register 1.2 VAC higher.

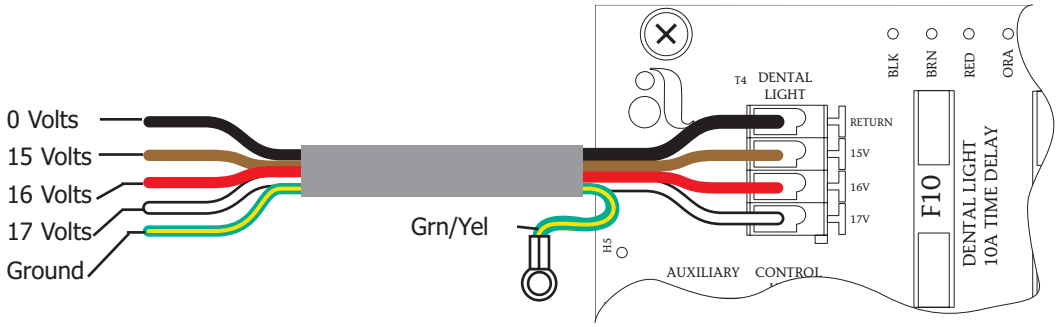
Cascade Unit and Radius-Mounted Lights



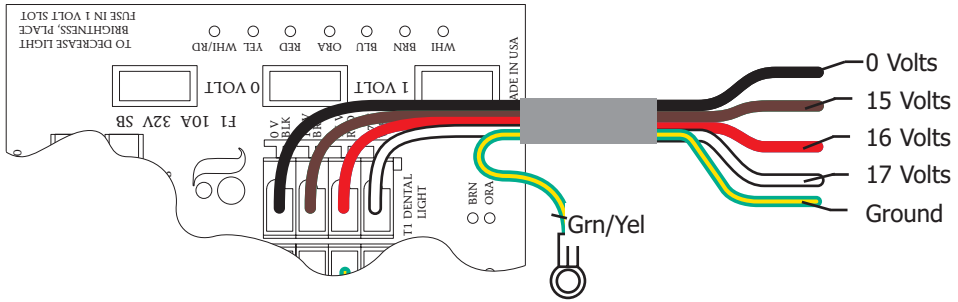
After May 1998

NOTE: Voltages shown are assuming 120/240 VAC. Secondary voltages measured without the lamp inserted will register 1.2 VAC higher.

Cascade Unit and Radius-Mounted Lights



300W before May 1998



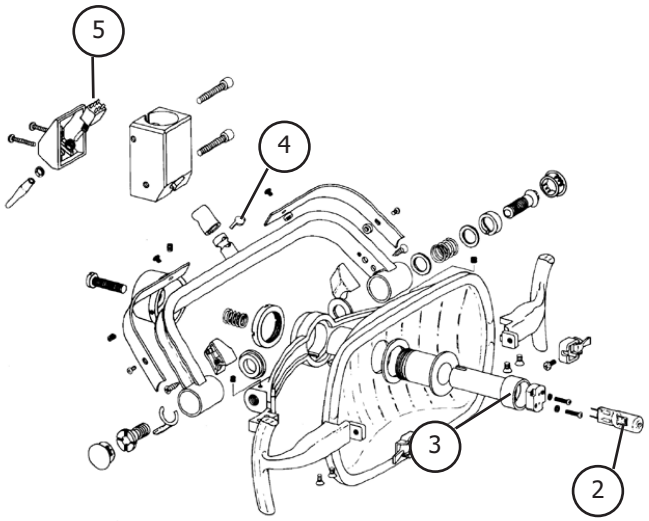
150W before May 1998

NOTE: Voltages shown are assuming 120/240 VAC. Secondary voltages measured without the lamp inserted will register 1.2 VAC higher.

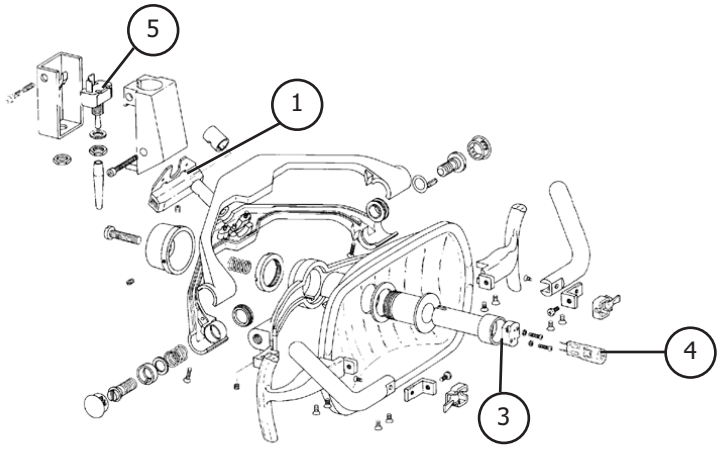
Dental Lights

Pre-Cascade Lights

Item #	Part Number	Description
1	28.0704.00	Bulb with holder
2	041.179.01	Bulb
3	90.0463.01	Lamp socket kit
4	28.0545.01	Pivot stop
5	90.0372.00	Light switch service kit
6	28.1012.00	Lens bracket assembly (2 required)



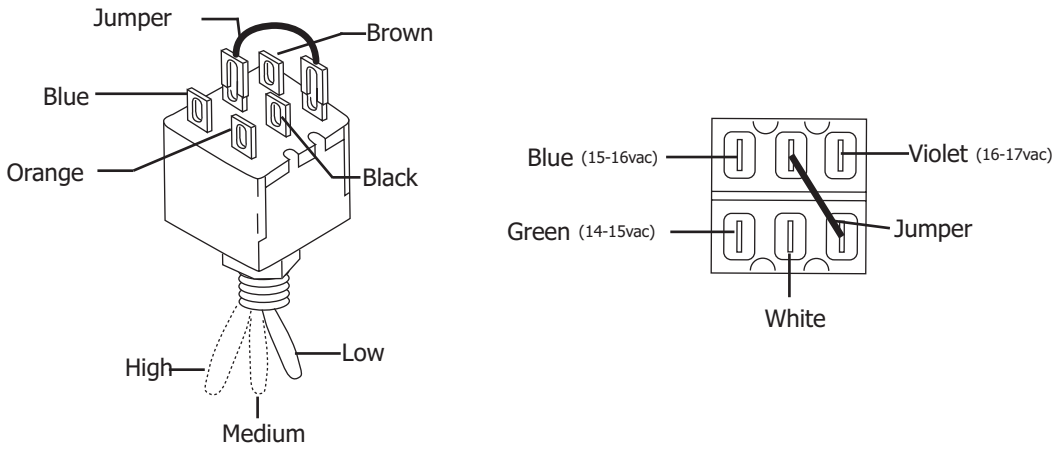
March 1985 to October 1987



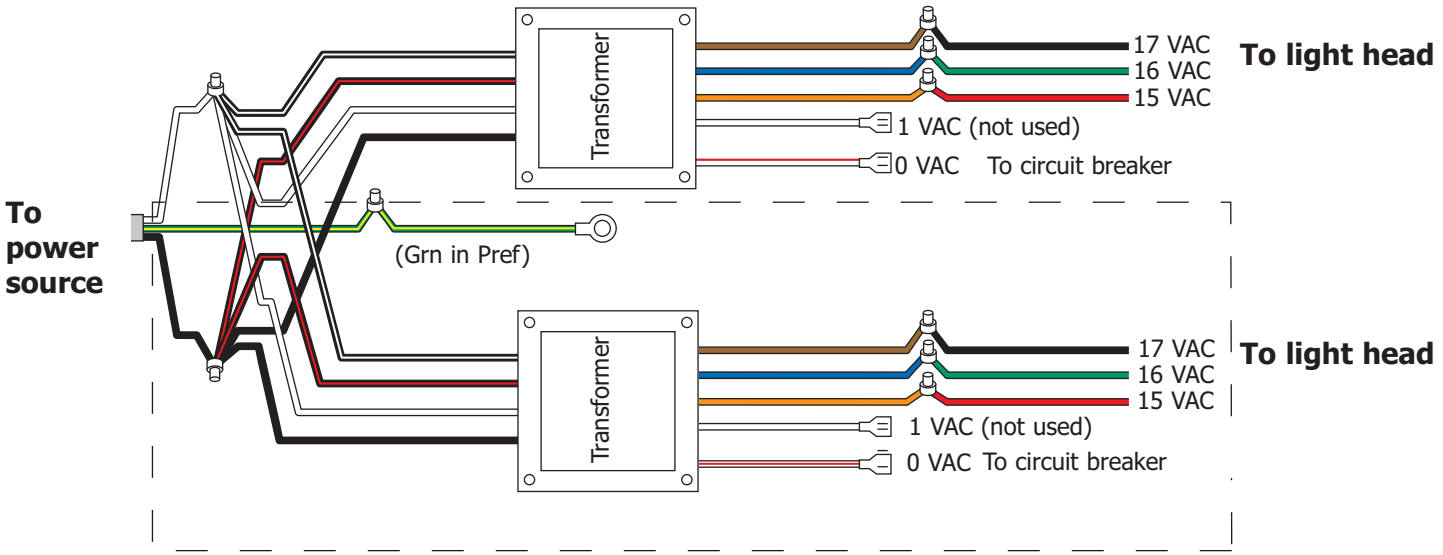
October 1987 to February 1994

Identifying Intensity Switch Connections (Pre-Cascade)

The illustration identifies the intensity switch connections for Pre-Cascade units.



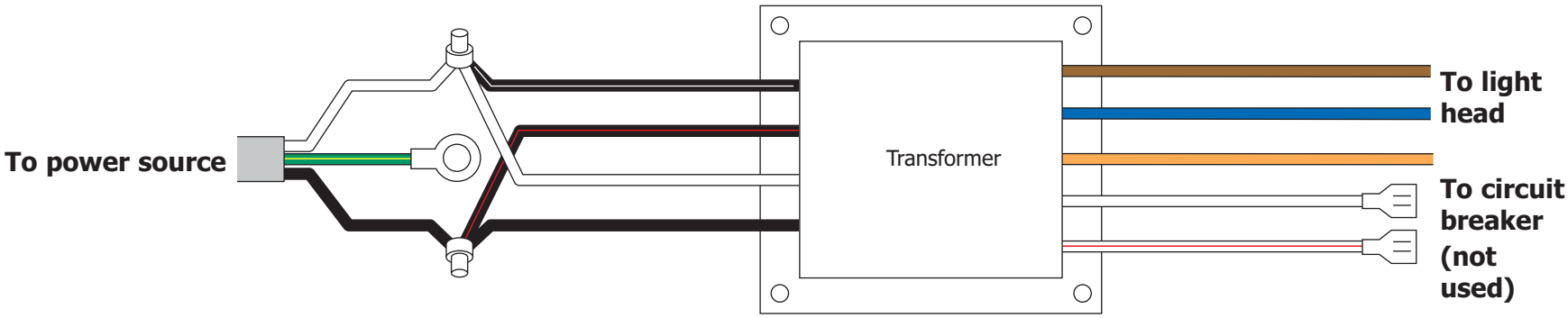
Wall-Mount, Single/Dual Track and Preference-Mounted Lights



Before January 1989

NOTE: Voltages shown are assuming 120/240 VAC. Secondary voltages measured without the lamp inserted will register 1.2 VAC higher.

Post, Ceiling, and
Excellence-Mounted Lights

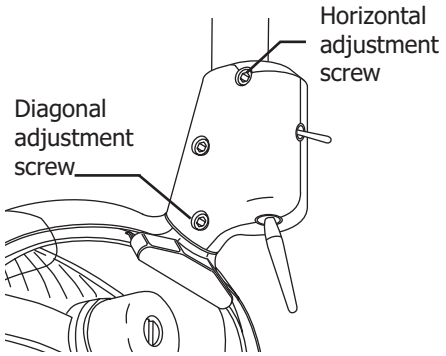


Before January 1989

Adjusting Diagonal and Horizontal Tension

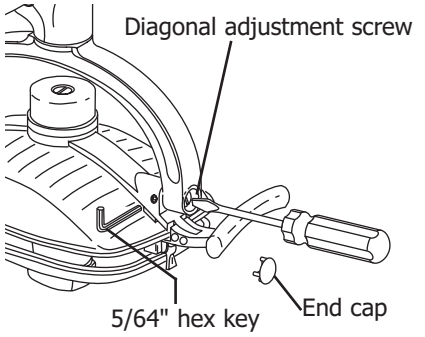
To adjust diagonal movement, use a 5/32" hex key to turn the adjustment screw at the bottom of the switch housing. Eliminate all movement in the diagonal axis by tightening the screw until it stops.

To adjust horizontal movement, use a 5/32" hex key to turn the adjustment screw at the top of the switch housing.



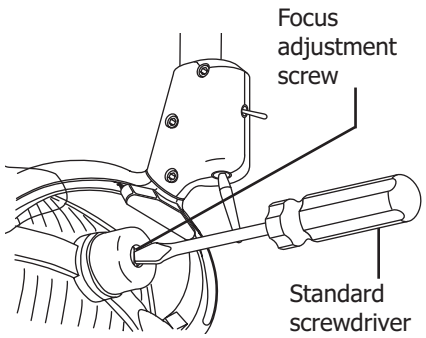
Adjusting Vertical Tension

To adjust vertical movement, use a 5/64" hex key to loosen the setscrew on the right side of the light head. Remove the end cap. Use a large flat-blade screwdriver to turn the adjustment screw under the end cap. If the light head moves too easily, or tends to drift out of position, increase the tension by turning the screw clockwise. When the desired tension is achieved, reinstall the end cap and retighten the setscrew.



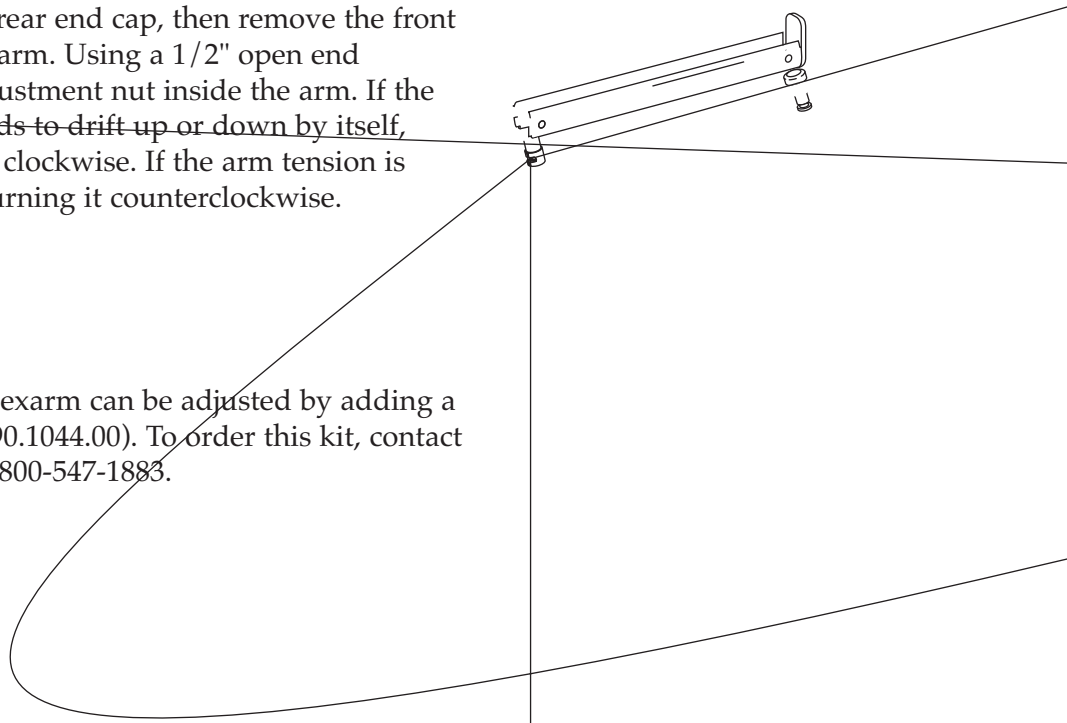
Focusing the Light

The focus of the light is adjusted at the factory for proper illumination at 27" from the oral cavity. If the light requires focusing to suit the user's style of practice, place a white towel over the chair headrest and position the light at the distance from the towel required by the user. Using a large screwdriver or coin, turn the focus adjusting screw until the light pattern is uniform in brightness without shadowing. The range of adjustment is 18" to 31".



Adjusting the Flexarm

Remove the screw from the rear end cap, then remove the front end cap and cover from the arm. Using a 1/2" open end wrench, turn the tension adjustment nut inside the arm. If the arm moves too easily, or tends to drift up or down by itself, tighten the nut by turning it clockwise. If the arm tension is too stiff, loosen the nut by turning it counterclockwise.



Adjusting Flexarm Travel (Limit Up)

The upward motion of the flexarm can be adjusted by adding a Travel Stop Limit Kit (P/N 90.1044.00). To order this kit, contact A-dec customer service at 1-800-547-1883.

Adjusting Flexarm Travel (Limit Down)

The downward motion of the flexarm can be adjusted by adding a Travel Stop Limit Kit (P/N 90.1044.00). To order this kit, contact A-dec customer service at 1-800-547-1883.

Troubleshooting Dental Lights

Tips and troubleshooting information are listed in the following charts to assist in diagnosing dental light problems. These charts are not intended to cover every situation, but do include the most common problems you may encounter.

Problem	Action
Light head is sloppy or difficult to position	Adjust the appropriate axis tension.
Flexarm drifts	Adjust the flexarm counterbalance.
Track light trolley drifts	Using shims, level the track light ceiling pallet.
Track trolley light bounces back when pushed to the end of the track	Check power cable in track for proper routing.
Light intensity is too dim, inconsistent, or the color is distorted	Follow these steps. **Task** **Description** 1 Clean the reflector and shield. 2 Check the shield for abrasions and replace, if necessary. 3 Replace the lamp if discolored.

<table>
<tr><th>Problem</th><th>Action</th></tr>
<tr><td>Unsatisfactory light pattern</td><td>Follow these steps to determine the problem.

Task Description

1 Focus the light

2 Clean the reflector and shield.

3 Check the shield for abrasions and replace if necessary.</td></tr>
<tr><td>Light does not function</td><td>Use these points to determine why the light doesn’t work.

<table>
<tr><th>If . . .</th><th>Then . . .</th></tr>
<tr><td>No power to the light</td><td>Check to make sure the dental light is connected to a working source of power.

Check to make sure all electrical switches are in the ON position and the input voltage selector switch is set properly.

Make sure the power supply air-electric switch has sufficient air pressure to close.</td></tr>
<tr><td>Defective socket</td><td>Measure the voltage at the socket.</td></tr>
<tr><td>Lamp has failed</td><td>Replace the lamp.</td></tr>
<tr><td>Blown fuse or tripped circuit breaker</td><td>Check to see if fuse has blown or circuit breaker has tripped.</td></tr>
<tr><td>No power to the transformer</td><td>Check for loose connections at the transformer.

Measure the transformer output voltages.</td></tr>
</table>
</td></tr>
</table>

Problem	Action
One or more intensity positions do not function	Use these points to identify and correct intensity.

If . . .	Then . . .
Transformer not supplying one or more voltages	Check for loose connections at the transformer. Measure the transformer output voltages.
No power to the intensity switch	Measure the voltages at the intensity switch.
No power to the On/Off switch to the lamp, and no voltage measured at the On/Off switch to the lamp	Replace intensity and On/Off switch. Measure the transformer output voltages.
No power to the On/Off switch to the lamp, and a voltage is measured at the On/Off switch to the lamp	Replace the socket.

Dental Lights

Notes